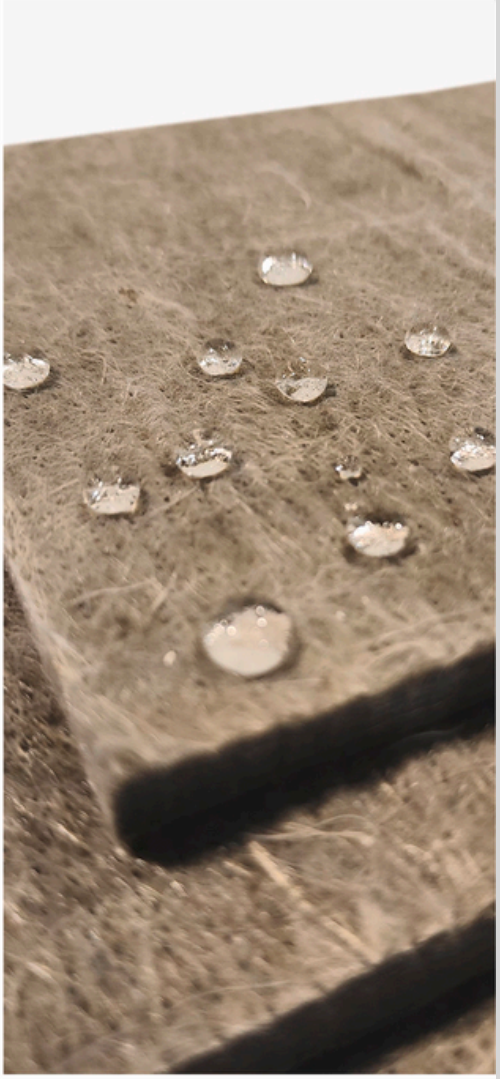
INSULATION JUST GOT EVEN BETTER

ArmaGel XGH

Next generation, flexible, aerogel blanket for high-temperature applications

// A2-s1,d0, Non-combustible
// ASTM C1728 compliant
// IOGP S-738 (JIP33) compliant
// Hot conditions up to 650°C (1200°F)
// Up to five times better thermal performance than traditional insulation materials
// Mitigates the risk of corrosion under insulation (CUI)



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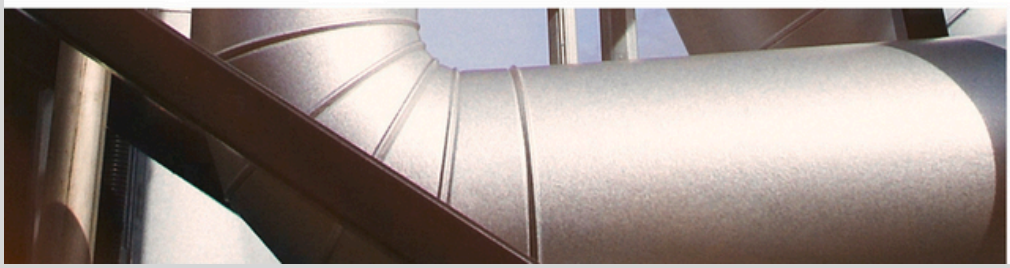

Application engineering & distribution by:

INSULCON

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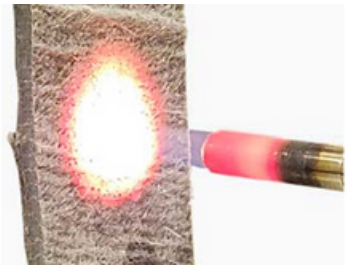
INSULATION JUST GOT EVEN BETTER.

ArmaGel XGH

The next generation of aerogel blanket technology. Superior thermal performance with excellent CUI protection and non-combustibility. ASTM C1728 compliant. Designed for safety and conditions up to 650 °C (1200 °F). ArmaGel XGH is the reliable solution for high-temperature applications.

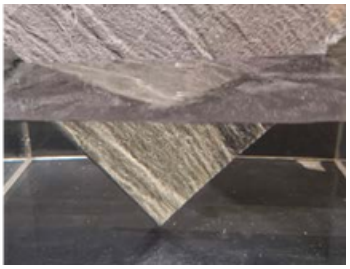
Proprietary dust control

High-temperature / Non-combustible



Flexible

Hydrophobic



UP TO
80%
THINNER
than traditional insulation products

UP TO
5 ×
SUPERIOR THERMAL PERFORMANCE
than traditional insulation products

YOUR BENEFITS

// Superior thermal performance
Offering up to 5 times superior thermal performance versus traditional insulation products.

// Save space & weight
Up to 80% saving in insulation thickness and reduce insulation system weight.

// CUI defence
Hydrophobicity and breathability enhances protection against corrosion under insulation (CUI).

// Reduce downtime and save money
Product installation and removal is made simple, reducing the downtime. Reusable due to durable format to save money during regular maintenance cycles.

// Versatile format
Can be cut and fit into any pipe and equipment.

// Reduce labour cost
Cuts easily and conforms to preferred shapes, with less wastage, making it the right fit for installers.

// Optimised inventory management
Sheet in roll form reduces inventory management and logistic costs relative to rigid/preformed insulation. Available in 5, 10 and 20mm thicknesses.

// Dust control
Proprietary dust control technology ensures a cleaner, more efficient work environment.

// Non-combustible
Enhance asset safety with ArmaGel XGH.

// Acoustic Performance
When used in a system configuration, ArmaGel XGH meets and exceeds the insertion loss classifications according to ISO 15665
at reduced thickness and weight*.
**compared to traditional systems*

TECHNICAL DATA - ARMAGEL XGH

Brief description	ArmaGel XGH is a flexible aerogel blanket suitable for elevated temperature applications with maximum operating temperatures up to 650°C (1200°F). ArmaGel XGH is compliant to ASTM C1728, Type III, Grade 1A and IOGP S-738 (JIP33)
Material type	Aerogel blanket.
Product colour range	Grey
Special features	ArmaGel XGH is resistant to elevated operating temperatures up to 650 °C (1200 °F).
Product range	Sheets in rolls, 5 mm (0.2 in), 10 mm (0.4 in) and 20 mm (0,8 in) thickness, width of 1.5 m (59 in). For further details, please refer to the product range tables at the end of this document.
Applications	Thermal insulation/protection of pipes, vessels and ducts (including elbows, fittings, flanges etc.) in offshore, industrial (typically oil and gas) and process equipment facilities.
Installation	For industrial applications it is recommended to consult the relevant Insulcon application manual(s). For further information please contact our Technical Services.

Property	Value / Assessment									Standard / Test method
Temperature range										
Service temperature[1,2,3,4,5]	Max. °C				Max. °F					ASTM C411, ASTM C447
	650				1.200					
Thermal conductivity										
Declared thermal conductivity[6]	Θm	24°C (75°F)	38°C (100°F)	93°C (200°F)	149°C (300°F)	204°C (400°F)	260°C (500°F)	316°C (600°F)	371°C (700°F)	ASTM C177
	λd ≤ [W/(m·K)]	0,021	0,022	0,023	0,025	0,029	0,032	0,036	0,043	
	k ≤ [Btu·in/(h·ft²·°F)]	0,14	0,15	0,16	0,18	0,20	0,22	0,25	0,30	
Temperature resistance										
Hot surface performance[2]	Pass									ASTM C411
Linear shrinkage under soaking heat	<2% in width and length									ASTM C356
Fire Performance and Approvals										
Reaction to fire[2]	A2-s1,d0, Non-combustible									EN 13501-1
Surface burning characteristics	≤ 5 flame spread index ≤ 10 smoke development									ASTM E84
Resistance to water vapour										
Water vapour sorption	≤ 5% by weight									ASTM C1104
Resistance to water										
Hydrophobic	Yes									
Water absorption	Pass									ASTM C1763
Corrosion mitigation										
Corrosiveness to steel	Pass									ASTM C1617, Procedure A
Stress corrosion cracking	Pass, no cracks									ASTM C692, ASTM C795
Physical attributes										
Nominal density	180 kg/m³ (11 lb/ft³)									ASTM C303
Mechanical properties										
Compressive strength[7]	≥ 3 psi/ 20.7 kPa at 10% compression									ASTM C165

Property	Value / Assessment	Standard / Test method
Flexibility of insulation blankets	Flexible	ASTM C1101
Weather and UV resistance		
Weather resistance	In all industrial applications the outer layer of the material must be protected with an adequate covering like metal jacketing or preformed UV-cured GRP (Glass-Reinforced Plastic) cladding. Please contact Technical Services for guidance on the temperature construction considerations which need to be made for each jacketing system.	
Health and environment		
Fungal growth	No growth	ASTM C1338
Health aspects	Neutral	
Other technical features		
Shelf life	Material shall be stored indoors, in clean and dry conditions, away from direct sunlight.	
Storage[8]	Max. 3 years	

[1] For use in temperatures beyond the published value, please contact Technical Services.
[2] For operating temperatures above 400 °C (752 °F) a metallic foil barrier with 0.05 mm (0.002 inch) thickness must be additionally installed. For details please contact Technical Services.
[3] For live line installations, refer to the ArmaGel HT and HTL application manual.
[4] For design/installation above 80 mm thickness, contact Insulcon technical services.
[5] ArmaGel XGH is designed for applications where the operating temperature is higher than the ambient temperature. If the operating temperature is lower than the ambient temperature, please contact our technical support team for more information and assistance.
[6] Measured under a load of 1.5 kPa (0.22 psi).
[7] Test performed with a preload of 13.8 kPa (2 psi).
[8] Shelf life (maximum storage time) is limited to ensure that only currently manufactured products are installed on projects. This limitation is restricted solely to storage of the product and does not affect the lifetime of product after it has been installed.

Roll - jumbo

Short name	Thickness [mm]	Width [m]	Length [m]	EAN	Primary content [metric]
AXH-05-00/150P	5	1,5	54	7612207566932	81 m²
AXH-10-00/150P	10	1,5	30	7612207566949	45 m²
AXH-20-00/150P	20	1,5	15	7612207570380	22.5 m²

Additional information	
Thickness tolerance	5 mm (0.2 in) thickness: ± 1 mm 10 mm (0.4 in) thickness: ± 2.5 mm 20 mm (0.8 in) thickness: ± 5 mm
Length tolerance	± 5%
Width tolerance	± 3%

Roll - standard

Short name	Thickness [mm]	Width [m]	Length [m]	EAN	Primary content [metric]
AXH-05-00/150S	5	1,5	18	7612207567717	27 m²
AXH-10-00/150S	10	1,5	10	7612207566574	15 m²
AXH-20-00/150S	20	1,5	5	7612207570373	7.5 m²

Additional information	
Thickness tolerance	5 mm (0.2 in) thickness: ± 1 mm 10 mm (0.4 in) thickness: ± 2.5 mm 20 mm (0.8 in) thickness: ± 5 mm: ± 1 mm
Length tolerance	± 5%
Width tolerantie	± 3%

All data and technical information are based on results achieved under the specific conditions defined according to the testing standards referenced. Despite taking every precaution to ensure that said data and technical information are up to date, Insulcon does not make any representation or warranty, express or implied, as to the accuracy, content or completeness of said data and technical information. Insulcon also does not assume any liability towards any person resulting from the use of said data or technical information. Insulcon reserves the right to revoke, modify or amend this document at any moment. It is the customer's responsibility to verify if the product is suitable for the intended application. The responsibility for professional and correct installation and compliance with relevant building regulations lies with the customer. This document does not constitute nor is part of a legal offer to sell or to contract.

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A100-006 | ArmaGel XGH | TDS Product Brochure | EN | 112025

ABOUT INSULCON

The Insulcon Group is a leading international manufacturer and supplier of high-temperature and energy-saving solutions for the thermal process industry. With a strong focus on heat management, process optimization, and workplace safety, we deliver reliable and durable insulation systems for extreme conditions. Our product portfolio includes high-performance refractories, technical fibres, low thermal mass insulation systems, and engineered components. Across Europe, we operate multiple production facilities – including two of the most advanced industrial textile plants in Europe (Insulcon N.V.,Belgium and Tespe in Italy), a vacuum forming plant (DualInvest, Hungary and Insulcon, Netherlands), and in-house die-cutting and machining lines. With global sales, service, and inspection capabilities, we support industries such as petrochemical, energy, metals, ceramics, domestic appliances, and waste treatment. Our huge warehouse, strategically located between the ports of Rotterdam and Antwerp, but also Italy, UK, Germany and Hungary enables fast worldwide logistics. We are committed to delivering solutions that reduce energy consumption, improve process control, and enhance safety – helping our customers meet the demands of a more sustainable future.

For more information, please visit:
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